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The Trane Company
Patent Department - 12-1
3600 Pammel Creek Road
La Crosse, WI 54601

EXAMINER

ROBINSON BOYCE, AKIBA K

ART UNIT	PAPER NUMBER
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3628

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/747,642	Applicant(s) MORONEY ET AL.	
	Examiner AKIBA K. ROBINSON BOYCE	Art Unit 3628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10, 11, 13 and 16-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10, 11, 13 and 16-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Status of Claims

1. Due to communications filed 12/14/09, the following is a final office action. Claims 1, and 10 have been amended. Claims 9, 12, 14-15 and 23-31 have been cancelled. Claims 23-59 have been withdrawn. Claims 1-8, 10, 11, 13, and 16-22 are pending in this application. The previous rejection has been modified to reflect claim amendments. Claims 1-8, 10, 11, 13, and 16-22 are rejected as follows.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-11, 13, 16-22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-11, 13, 16-22 are directed to a series of steps. In order for a series of steps to be considered a proper process under § 101, a claimed process must either: (1) tied to a particular machine or apparatus, or (2) transforms a particular article to a different state or thing. *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972). Thus, to qualify as patent eligible, these processes must positively recite the other statutory class to which it is tied (e.g., by identifying the apparatus the accomplishes the method steps), or positively recite the subject matter that is being transformed (e.g., by identifying the product or material that is changed to a different state). Claims 1-11, 13, 16-22 identify

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neither the apparatus performing the recited steps nor any transformation of underlying materials, and accordingly are directed to non-statutory subject matter.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 2, 5, 7, are rejected under 35 U.S.C. 103(a) as being unpatentable over Thackston (US 2002/0072820), and further in view of Thackston (US 6,295,513), now referred to as Thackston '13.

As per claim 1, Thackston discloses a system and process method for facilitating efficient communication of specifications for parts and assemblies including:

developing, via a computer system, an electronic specification describing a product and a plurality of components thereof, ([0030], FIG. 1 is a flow chart illustrating a process for approving an electronic specification according to an embodiment of the invention, and [0043], A first software component may allow the specification information to be entered and associated with highlighted features. Such a software component may be used to create the specification panels as shown in the examples of FIGS. 2, 3 and 4);

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inducing the plurality of companies to manufacture the plurality of components, wherein the step of inducing the plurality of companies to manufacture the plurality of components includes forwarding the electronic specification to a specific company that is one of the plurality of companies, ([0048], lines 1-13, shows that part or assembly may undergo a number of different fabrication processes that may or may not be performed by the same fabrication vendor, that coordination of such activity is usually done by the primary fabricator, however, the contracting design company however, has the greatest interest in the success of any coordination activity and may specify in contractual arrangements how such activity is to be managed. and that specifications for one or more parts may be forwarded to each fabricator involved in a part, where examiner interprets the fabrication vendors/fabricators as the companies);

inducing the specific company to build the product or a component thereof in accordance with a plurality of requirements in the electronic specification, wherein the component is one of the plurality of components, ([0048] shows that as each fabricator performs their activity associated with each part, the fabricator can measure the part to ensure that they have fully complied with specifications)

Thackston does not disclose the following limitations, however, Thackston '13 discloses:

the specific company building the product or the component thereof in accordance with the plurality of requirements in the electronic specification, (col. 28, lines 5-9, shows

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design team creates a preliminary design using baseline part design model management module);

testing the product or the component thereof, (col. 27, lines 8-13, In general, modules 1502-1532 represent software which is used by design team members during the design and development phase to evaluate a proposed design. Typically, the current baseline part design model (or parts thereof) is the input, and the output is some measure of performance or compliance with applicable specifications, and col. 28, lines 42-45, shows analysis and simulation is performed to evaluate the preliminary baseline part design model);

upon testing the product or component thereof, creating an operability test result, (col. 28, lines 46-62. working copy type design model);

appending, via the computer system, the operability test result to the electronic specification, thereby creating an appended operability test result: (col. 28, lines 46-62, shows working copy type design model may be stored by the NICECAD system, col. 29, lines 3-9, The prime contractor may then store the new preliminary baseline part design model, as in step 1628. In one embodiment, this new model may be stored in module 865 of FIG. 8 and a revision history in module 840 of FIG. 8 would be updated.

Preliminary PDM documents may be updated as required for the new design, as in step 1630, and col. 6, lines 1-3 shows The stored part design model data may include links

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to associated specifications, standards and other design specific documents , thereby suggesting that the design models or any updated versions that have been revised are stored as part of the specification since they have a direct link to the specification).

inducing the specific company to determine if the product or the component thereof is completed, (col. 38, line 39-col. 39,line 11, analysis of producibility);

inducing the specific company to forward the electronic specification with the appended operability test result to another one of the plurality of companies, (col. 38, line 39-col. 39, line 11, shows the preparation of a first query as a result of the designer's preference inputs which may be run against the database to identify a first results list of qualified fabricators, and then for a full search (which may include the upload of a part design model, producibility analysis and a second query, among other steps), producibility analysis second query processing module 2650 performs a producibility analysis of the uploaded, converted and attribute-assigned part design model in order to prepare the second query set for a second results list of qualified fabricators, thereby suggesting that whether or not the design is produced, this information influences a search for a second set of fabricators that can produce the design); and

assembling the plurality of components to produce the product, (col. 41, lines 10-12, shows fabrication effort by the fabricator).

It would have been obvious to combine Thackston and Thackston '13 to disclose the limitations of claim 1 with the motivation of showing a system and process method for facilitating efficient communication of specifications for parts and assemblies for manufacture, where the manufacture of parts additionally includes the design, development, and fabricator selection for a final design fabrication.

As per claim 2, Thackston discloses:

wherein the forwarding step includes the step of providing a central server to centralize the forwarding step, (ab, shows central server).

As per claim 5, Thackston fails to disclose the following, however, Thackston '13 discloses:

step of saving at least one updated version of the electronic specification, (col. 28, lines 46-62, shows working copy type design model may be stored by the NICECAD system, col. 29, lines 3-9, The prime contractor may then store the new preliminary baseline part design model, as in step 1628. In one embodiment, this new model may be stored in module 865 of FIG. 8 and a revision history in module 840 of FIG. 8 would be updated. Preliminary PDM documents may be updated as required for the new design, as in step 1630, and col. 6, lines 1-3 shows The stored part design model data may include links to associated specifications, standards and other

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design specific documents , thereby suggesting that the design models or any updated versions that have been revised are stored as part of the specification since they have a direct link to the specification).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to save at least an updated version of the electronic specification with the motivation of having the most recent specification to use for building the design.

As per claim 7, Thackston '13 discloses:

the step of revising the updated version to include late customer changes, (col. 15, lines 57-61, if a fabricator team analyzing producibility determines that certain design changes should be effected, a proposed revised baseline part design model may be stored in this module).

6. Claims 6 and 8, are rejected under 35 U.S.C. 103(a) as being unpatentable over Thackston (US 2002/0072820), and further in view of Thackston (US 6,295,513), now referred to as Thackston '13, and further in view of Sanchez-Lazer et al (US 6,000,945).

As per claim 6 neither Thackston nor Thackston '13 disclose the following, however, Sanchez-Lazer et al discloses:

comparing the updated version of the electronic specification with an electronic specification having appended test results, (Col. 19, lines 41-43, comparing worksheet contents to saved constraint set containing test specifications).

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It would have been obvious to disclose the above limitation with the motivation of ensuring the correct specification has been updated.

As per claim 8, neither Thackston nor Thackston '13 disclose the following, however, Sanchez-Lazer et al discloses: comparing the revised updated version of the electronic specification with an electronic specification having appended test results; wherein the comparing step includes the steps of determining and implementing late customer changes to the electronic specification in the product or components, Col. 20, lines 16-24, review of layout).

It would have been obvious to disclose the above limitation with the motivation of ensuring the correct specification has been revised.

7. Claims 3, 4, 10, 11, 13, 16-19, 20-22, are rejected under 35 U.S.C. 103(a) as being unpatentable over Thackston (US 2002/0072820), and further in view of Thackston (US 6,295,513), now referred to as Thackston '13, and further in view of Marchak et al (US 6,138,104), and further in view of Hunt et al (US 5,042,668), and further in view of Cho et al (US 5,295,067).

As per claims 3, 4, 10, 17, 21, neither Thackston nor Thackston '13 specifically disclose the following, however, Marchak et al discloses:

developing an installation sequence from the build and test instructions, (Col. 3, lines 49-61, Individual work deliverables are defined in terms of a sequence of life-

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cycle stages, where each stage defines the roles responsible for planning, doing, administering, and receiving the deliverable at that stage, and the specific fields and attachments that are visible, modifiable, and required at that stage.); and

building the product using the build and test instructions in the sequence laid out by the installation sequence, (Col. 18, lines 14-16, user indicates work is completed).

It would have been obvious to combine the teachings of Thackston, Thackston '13 and Marchak et al to disclose the above limitations with the motivation of incorporating billing into the design of a product.

Neither Thackston, Thackston '13, Marchak et al, nor Hunt et al disclose the following:

However, Cho et al discloses:

providing a bill of materials for the components and the product at the time the electronic specification is developed/creating a bill of materials and a specification/periodically comparing the bill of materials to the electronic specification to verify the accuracy of both/ wherein the installation developing sequence includes a further step of cross checking the bill of materials with the installation sequence/ generating a sales order representative of a product/ developing build and test instructions from the sales order (Claim 6, determining a required bill of materials list for said order configuration by evaluating said order configuration according to said encoded relationships, where the first knowledge base for creation of the order configuration includes the specification). Cho et al discloses this limitation in an analogous art for the purpose of showing that the bill of materials is evaluated according to the specification.

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It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide a bill of materials for the components and the product at the time the electronic specification is developed/creating a bill of materials and a specification/periodically comparing the bill of materials to the electronic specification to verify the accuracy of both/ wherein the installation developing sequence includes a further step of cross checking the bill of materials with the installation sequence with the motivation of allowing a bill of materials to be created according to the specification.

As per claim 11, Thackston fails to disclose the following, however, Thackston '13 discloses:

wherein the developing and building steps are performed under the control of a control device, (abstract, central controller).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to build and test under the control of a control device with the motivation of having means to control the process.

As per claim 13, Thackston fails to disclose the following, however, Thackston '13 discloses:

wherein the developing an installation sequence step is accomplished by a tester device which also oversees the building step, (col. 27, lines 8-13, In general, modules 1502-1532 represent software which is used by design team members during the design and development phase to evaluate a proposed design. Typically, the current

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baseline part design model (or parts thereof) is the input, and the output is some measure of performance or compliance with applicable specifications, and col. 28, lines 42-45, shows analysis and simulation is performed to evaluate the preliminary baseline part design model).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to develop an installation sequence step is accomplished by a tester device which also oversees the building step with the motivation of allowing means for properly testing the design.

As per claim 16, Thackston, Thackston '13 and Marchak et al fail to disclose: wherein the responding step further includes the step of providing the signaling component with operational parameters, however, Hunt et al discloses this limitation in (col. 6, lines 5-14, signals used to indicate presence). Hunt et al discloses this limitation in an analogous art for the purpose of showing that signals are used to indicate the presence of a component.

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to disclose all above limitations with the motivation of using bus signals to control the operation of building components.

As per claim 18, Thackston fails to disclose the following, however, Thackston '13 discloses:

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Wherein the developing the build and test instruction step includes the further step of using the specification to create a build and test file, (col. 28, lines 46-62, shows working copy type design model may be stored by the NICECAD system, col. 29, lines 3-9, The prime contractor may then store the new preliminary baseline part design model, as in step 1628. In one embodiment, this new model may be stored in module 865 of FIG. 8 and a revision history in module 840 of FIG. 8 would be updated.

Preliminary PDM documents may be updated as required for the new design, as in step 1630, and col. 6, lines 1-3 shows The stored part design model data may include links to associated specifications, standards and other design specific documents).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to use the specification to create a build and test file with the motivation of allowing means for properly testing the design.

As per claim 19, Thackston fails to disclose the following, however, Thackston '13 discloses:

wherein the build and test file is in the xml format, (col. 10,line 9, xml)

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention for the build and test file is in the xml format with the motivation of allowing means for properly testing the design in an xml format.

As per claim 20/22, Thackston fails to disclose the following, however, Thackston '13 discloses:

Wherein the installation sequence developing step includes the further step of cross checking the installation sequence with the specification/wherein the verifying step includes the further steps of testing the operation of the communications bus, testing the operation of the component, and cross checking the identity, parameters and the operation of the component and the bus with the specification, (col. 38, line 39-col. 39, line 11, analysis of producibility).

It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to disclose the above limitations with the motivation of allowing means for properly testing the design.

Response to Arguments

8. Applicant's arguments filed 11/25/09 have been fully considered but they are not persuasive. Applicant's amendments do not overcome 101 rejection, However, if the word "via" is changed to "by", this would overcome the 101 rejection.

9. Applicant's arguments with respect to claims 1-8, 10, 11, 13, and 16-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Akiba K Robinson-Boyce whose telephone number is 571-272-6734. The examiner can normally be reached on Monday-Friday 9am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hayes can be reached on 571-272-6708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

•Patent Application Information Retrieval (PAIR) system, Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status

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information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

A. R. B.
March 11, 2010

/Akiba K Robinson-Boyce/

Primary Examiner, Art Unit 3628